Amendments to the Claims

Claim 1 (previously amended): An affinity-controlling material, comprising a stimulus–responsive polymer and an affinitive substance (ligand) having affinity for a target substance independently attached to a support matrix.

Claim 2 (previously amended): The affinity-controlling material of claim 1, wherein the affinity between the affinitive substance and the target substance is reversibly changed by subjecting a mixture of the affinity-controlling material and the target substance, in solution, to a physical stimulus thereby changing the chemical or physical environment around the affinitive substance provided by the polymer.

Claim 3 (previously amended): The affinity-controlling material of claim 2, wherein the affinity between the affinitive substance and the target substance is reversibly changed by the physical stimulus while keeping at least one of conditions other than temperature constant.

Claim 4 (previously amended): The affinity-controlling material of claim 2, wherein said physical stimulus is a temperature change.

Claim 5 (previously amended): The affinity-controlling material of claim 1, wherein the affinitive substance of a target substance does not interact with the stimulus-responsive polymer.

Claim 6 (previously amended): The affinity-controlling material of claim 1, wherein the affinity of the affinitive substance for the target substance is dependent on the length of a spacer by which the affinitive substance of the target substance is bonded to the support.

Claim 7 (previously amended): The affinity-controlling material of claim 1, wherein the support comprises hydrophilic porous polymer particles having a uniform particle size produced by a membrane emulsification polymerization of monomers having epoxy groups on side chains and a chemical treatment with an acidic substance or a basic substance.

Claim 8 (cancelled)

Claim 9 (previously amended): In a method of separating and purifying a target substance by affinity, the improvement comprising using the affinity-controlling material of claim 1.

Claim 10 (previously added): A chromatographic packaging material comprising the affinity-controlling material of claim 1.

Claim 11 (previously added): The affinity-controlling material of claim 1, wherein the affinity of the affinity of the affinitive substance for the target substance is dependent on the size of the stimulus-responsive polymer.